

6.2.1 Applicability and General Standards

- A. All new streets located in or adjoining any subdivision of land hereafter proposed shall conform to the standards of design established in this Part. In any subdivision of land hereafter proposed, the subdivider shall agree to make all dedications and complete all physical improvements as required in Table 6.2.1 before the Commission may approve the preliminary plan or minor plat. In no case shall any new lots be created or new street constructed that does not meet a pavement width of at least 18 feet, except that a five lot, five acre per lot subdivision may be accessed by a 12 foot gravel road with 3 foot earthen shoulders.
- B. All new development meeting one of the criteria listed in 1 through 6 below and having frontage on a public right-of-way shall dedicate land necessary to meet the minimum right-of-way width established in Table 6.2.1, unless exempted by the Planning Director and the Director of Works.
 - 1. Category 3 Review (includes Major Subdivisions)
 - 2. Rezoning/Plan Certain Development
 - 3. Conditional Use Permit
 - 4. Developments adjacent to legislatively adopted roadway improvement projects.
 - 5. Developments with road improvements as required by Metro Public Works and/or the LDC.
 - 6. Minor Subdivision Plats creating lots.
- C. Developments meeting one of the criteria listed above that contain land that is depicted for future roadways shown in the comprehensive plan, legislatively adopted roadway plans, or an approved road alignment study shall dedicate right-of-way as outlined within the applicable plan or study.
- D. All single family residential developments or detached unit condominium developments shall not create private streets unless written approval is obtained from the Directors of Works and Planning.
- E. All new development and subdivisions having frontage on roadways proposed for bicycle facilities in the Comprehensive Plan shall provide right-of-way necessary to accommodate such facilities. The applicant shall construct the bicycle facilities, unless the Planning Director and the Director of Works determine, based on roadway conditions or the status of adjacent segments of the bicycle facility, that construction would not be appropriate.

6.2.2 Relationship of Streets to Topography

New streets shall be so related to the topography and to existing streets as to promote the public convenience and safety and to facilitate the proper use of the land they are constructed to serve. In particular, streets shall be designed to facilitate the drainage and storm water runoff objectives set forth in **Appendix 4H** (Erosion Prevention Sediment Control). Street Grades shall conform, as closely as practicable to the original topography.

6.2.3 Grade

No street grade shall be less than one per cent nor more than ten percent, unless a different grade is expressly approved by the Director of Works because of special topographical conditions.

The maximum grade at any point on a street constructed without curb and gutter shall be 6 percent, unless approved by Director of Works.

6.2.4 Street Intersections

- A. Number of Approaches - Intersections involving more than four basic street legs or approaches shall be prohibited. Merging lanes, deceleration lanes, "Y" intersections and traffic circles are not included in this prohibition, but are considered as being parts of one street leg or approach.
- B. Angle of Intersection - For a tangent distance of at least one hundred feet measured from the intersection of right-of-way lines, all streets shall intersect at an angle of ninety degrees, where practical, but in no case shall the angle be less than seventy five degrees.
- C. Intersection Offset - Streets entering opposite sides of another street shall be laid out either directly opposite one another or with a minimum offset of one hundred feet between their centerlines.
- D. Intersection Spacing - All local and cul-de-sac streets intersecting with and entering the same side of other collector, local or cul-de-sac streets shall be located at least two hundred feet apart measured from centerline to centerline. When the intersected street is an arterial, the distance between intersecting streets shall be at least 1,000 feet. All other streets intersecting with and entering the same side of any other street shall be located at least five hundred feet apart, measured from centerline to centerline, unless a closer spacing is expressly approved by the Director of Works, to promote the public convenience and safety and to facilitate the proper use of the surrounding land.
- E. Grades at Intersections - Where the grade of any street at the approach to an intersection exceeds three percent, a leveling area shall be provided, having not greater than a three per cent grade for a distance of fifty feet from the intersection of the street centerline. A sag immediately adjacent to the intersecting street and a vertical curve shall be used to connect the intersection grades.

6.2.5 General Layout of Streets

- A. Coordination with Surrounding Streets - A proposed street shall recognize and extend the plan and profile of off-site existing streets, and shall make possible the future extension of streets into adjacent undeveloped land. Collector streets shall intersect with surrounding collector or arterial streets at safe and convenient locations.
- B. Ingress and Egress - Access from new lots or a new street connecting an existing street shall not be approved unless the existing street has adequate pavement width to provide for ingress and egress to the proposed development.
- C. Alignment - The alignment of all streets shall be related to the centerline and shall be as follows, unless a different alignment is required by the Director of Works because of special topographical considerations or sound engineering practices:
 - 1. Major and Minor Arterials and Collectors - the radius of all horizontal curves shall be at least 573 feet and horizontal curves shall have a desired stopping site distance of 325 feet with the minimum stopping sight distance of 275 feet. All vertical crest and sag curves shall conform to the formula $L = KA$. The desired K value shall be 80 with a minimum K value of 55. The design of the horizontal and vertical curves may vary based on the design speed of the roadway as determined by the Director of Works.
 - 2. Local and Cul-de-sac Streets - All local and cul-de-sac streets shall be related to the topography of the subdivision and shall generally tend to discourage fast or through traffic.
- D. Corner Radii - The minimum radii at the pavement edge, or the back of the curb where required, shall be twenty-five feet for all street intersections, unless a different figure is expressly approved by the commission because of special topographical considerations or sound engineering practices. The minimum radii at the property line shall be fifteen feet for all street intersections, unless a different figure is expressly approved by the Director of Works because of special topographical considerations or sound engineering practices.
- E. Continuation of Existing Streets – Subdivisions shall be designed to ensure that existing public and private streets, which stub into the subject property must be extended through the subject property. For subdivisions creating any lot that abuts or has access to any proposed stub street extension, right-of-way shall be dedicated sufficient to accommodate the extension of the street, and the street shall be constructed in accordance with the requirements of this Land Development Code for constructing public or private roads.
- F. Cul-de-sac or Dead End Streets – Proposed closure of a section of cul-de-sac or dead end streets shall require installation of a turn-around or cul-de-sac unless waived by the Directors of Public Works and Planning or their designees. Signs shall be installed meeting the Manual on Uniform Transportation Control Devices (MUTCD).

6.2.6 Requirements for Specific Types of Streets and Alleys

- A. Minimum Requirements - New streets shall provide right-of-way and improvements specified in Tables 6.2.1 and 6.2.2, according to the functional class of the street and the form district in which it is located, subject to the following exception:
 - B. Development activity that meets the thresholds in the form district for Street and Roadside Design and new streets shall provide sidewalks in accordance with Tables 6.2.1 and 6.2.2 subject to the following exceptions:
 - Sidewalks shall not be required on lots that are five acres or greater in area and developed for single family residential uses unless they connect with existing sidewalks on both sides of the property.
 - Lots within approved major subdivisions in which the sidewalk(s) were waived as part of the subdivision approval for the applicable street frontage shall not be required to provide sidewalks.
1. Fee in Lieu Option - The Director of Works and the Director of Planning or designees may allow the payment in lieu of sidewalk construction upon a finding that construction of a sidewalk is not appropriate due to one of the following applicability requirements:
 - Sidewalks construction is impracticable due to topographical conditions or site constraints; or
 - A determination by the Director of Works and the Director of Planning or designees that sidewalks do not exist in the area and there is not a likelihood for sidewalks to be constructed in the future, except for areas where sidewalks are recommended within a Planning Commission or legislatively adopted plan recommending sidewalk construction.
 - a. Amount of fee shall be set by Metro Public Works based on average sidewalk construction. The fee in lieu amount for single family residential property that is not part of a major subdivision plan shall be calculated based on the minimum lot frontage of the applicable zoning district or actual lot width, whichever is less. All fees paid shall be used for sidewalk construction within the same Metro Council District. It should be noted that payment of a fee in lieu of sidewalk construction is an option available to developers that must be approved by the Director of Works and the Director of Planning or designees. Applicants retain the right to request a sidewalk waiver (see B.2 below); in no case shall the Planning Commission or Director of Works require the payment of a fee in lieu of sidewalk construction. The fee in lieu option shall not be approved and the sidewalk shall be constructed when one of the following situations apply:
 - Where an existing sidewalk network can be completed or extended, except in locations where site constraints cause construction difficulties as determined by the Director of Works and the Director of Planning or designees.
 - The required sidewalk would provide a direct means of

access to a lot that contains a pedestrian generator such as a school, church, library, community center or park.

- b. A new fee in lieu of sidewalk shall not be required in the future for a street frontage in which a fee in lieu has already been approved and paid.

2. Sidewalk Waiver

a. Applicability:

Any development site required to provide a sidewalk in accordance with applicable form district threshold tables of Chapter 5 of this code may submit an application for a sidewalk waiver in accordance with the submittal requirements of paragraph 2b below.

b. Submittal Requirements:

- i. A plan (e.g. development plan (plan certain or category review), minor plat, preliminary subdivision plan or conditional use permit plan.)
- ii. A justification document, which addresses as applicable the following items:
 - (a) How the proposed waiver conforms to the Comprehensive Plan and the intent of this Land Development Code;
 - (b) Why compliance with the regulations is not appropriate and granting of the waiver will result in a development more in keeping with the Comprehensive Plan and the overall intent of this Land Development Code;
 - (c) What impacts granting of the waiver may have on adjacent property owners;
 - (d) Why strict application of the provision of the regulations would deprive the applicant of the reasonable use of the land or would create an unnecessary hardship on the applicant.

c. Review Process:

- i. Notice shall be given in accordance with the provisions of LDC waivers as listed in Chapter 11 of this code.
- ii. The Planning Commission or designee or BOZA (only in conjunction with a review of a variance or conditional use permit request) shall review the waiver request in order to hear comments from concerned citizens and to review comments from Planning and Design Services staff and other agencies.
- iii. The Planning Commission or designee or BOZA (only in conjunction with a review of a variance or conditional use permit request) may approve waivers or modifications of standards upon a finding that:

- (a) The waiver will not adversely affect adjacent property owners; and

- (b) The waiver will not violate the Comprehensive Plan; and
 - (c) The extent of waiver of the regulation is the minimum necessary to afford relief to the applicant.
- iv. The Planning Commission or designee or BOZA (only in conjunction with a review of a variance or conditional use permit request) may grant a waiver to allow a reduced sidewalk requirement where less than 50% of the street frontage is being developed. A reduction waiver shall not exempt future development on the parcel from the construction of the remainder of the sidewalk.

Table 6.2.1

General Standard	Major Arterial	Minor Arterial	Collector	Local	Cul-de-sac	Alley
R.O.W Width	130 feet	120 feet	80 feet	60 feet/50 feet if curb & gutter	50 feet	25 feet
Pavement Width	As determined by the Director of Works; refer to Street Cross Sections for general guidance on pavement widths					
Sidewalk	Required ¹	Required ¹	Required ¹	Required	See Table 6.2.2	N.A.
Bicycle Lane	Bike Plan ²	Bike Plan ²	Bike Plan ²	Bike Plan ²		N.A.
Verge ³ (Planting Strip)	Width to be determined by Director of Works; refer to form district standards for recommended width (if adequate right-of-way)					N.A.

¹ Sidewalk is required on both sides of all streets. Minimum sidewalk width is 5 feet unless different width specified in Form Districts. With approval of the Director of Works, meandering sidewalks are specifically allowed.

² Bicycle facilities will be required along selected streets based on the adopted Bicycle and Pedestrian Plan.

³ Verge width will be determined by the Director of Works, depending on right-of-way width and site specific factors. Recommended widths are listed in the table.

Table 6.2.2

Form District Standards	The following standards are specific to the form district in which a roadway is located					
	Major Arterial	Minor Arterial	Collector	Local	Cul-de-sac	Alley
Neighborhood	Sidewalk: 5 feet; Verge: 15 feet	Sidewalk: 5 feet; Verge: 15 feet	Sidewalk: 5 feet; Verge: 10 feet	If <20 lots, cul-de-sac standards ⁴ ; Sidewalk: 4 feet	Sidewalk (4 feet) if more than 20 dwellings	15 feet pavement w. 5 feet utility easements
Traditional Neighborhood	Sidewalk: 5 feet Verge: 5 feet	Sidewalk: 5 feet Verge: 5 feet	Sidewalk: 5 feet Verge: 5 feet	Sidewalk: 5 feet Verge: 5 feet	Sidewalk: 5 feet	15 feet pavement w. 5 feet utility easements
Village	Sidewalk: 6 feet in Center Verge: 6 feet	Sidewalk: 6 feet in Center Verge: 6 feet	Sidewalk: 6 feet in Center Verge: 4 feet	Sidewalk: 6 feet in Center; 4 feet in Outlying Areas Verge: 6 feet	Sidewalk (5 feet) if more than 20 dwellings	15 feet pavement w. 5 feet utility easements
Town Center	Sidewalk: 5 feet; Verge: 5 feet	Sidewalk: 5 feet; Verge: 5 feet	Sidewalk: 5 feet; Verge: 5 feet	Sidewalk: 5 feet; Verge: 5 feet	Sidewalk: 5 feet; Verge: 5 feet	Same as above
Traditional Marketplace	Sidewalk: 6 feet; Verge: 5 feet	Sidewalk: 6 feet; Verge: 5 feet	Sidewalk: 6 feet; Verge: 5 feet	Sidewalk: 6 feet; Verge: 5 feet	Sidewalk: 6 feet; Verge: 5 feet	Same as above
Suburban Marketplace	Sidewalk: 5 feet; Verge: 6 feet	Sidewalk: 5 feet; Verge: 6 feet	Sidewalk: 5 feet; Verge: 6 feet	Sidewalk: 5 feet; Verge: 4 feet	Sidewalk: 5 feet; Verge: 4 feet	Same as Above
Traditional Workplace	Sidewalk: 5 feet, Verge: 5 feet	Sidewalk: 5 feet; Verge: 5 feet	Sidewalk: 5 feet; Verge: 5 feet	Sidewalk: 5 feet; Verge: 5 feet	Sidewalk 5 feet; Sidewalk required unless < 5 lots	Same as above
Suburban Workplace	Sidewalk: 5 feet; Verge: 15 feet	Sidewalk: 5 feet; Verge: 15 feet	Sidewalk: 5 feet; Verge: 10 feet	Sidewalk: 5 feet; Verge: 6 feet	Sidewalk required unless < 5 lots	Same as above
Regional Center	Sidewalk: 5 feet; Verge: 10 feet	Sidewalk: 5 feet; Verge: 10 feet	Sidewalk: 5 feet; Verge: 10 feet	Sidewalk: 5 feet; Verge: 6 feet	Sidewalk: 5 feet; Verge: 6 feet	Same as above

⁴ Local level through streets that have no more than 20 single family lots when fully developed may be built to cul-de-sac right-of-way and pavement width standards, with a finding from the Director of Works that through traffic is adequately accommodated.

Table 6.2.2 continued

Form District Standards	The following standards are specific to the form district in which a roadway is located					
	Major Arterial	Minor Arterial	Collector	Local	Cul-de-sac	Alley
Campus	Sidewalk: 5 feet; Verge: 10 feet	Sidewalk: 5 feet; Verge: 10 feet	Sidewalk: 5 feet; Verge: 10 feet	Sidewalk: 5 feet; Verge: 6 feet	Sidewalk required unless < 5 lots	Same as above
Downtown *	Sidewalk: 7 feet	Sidewalk: 7 feet	Sidewalk: 7 feet	Sidewalk: 7 feet		Same as above

* 5 ft. sidewalk width is acceptable in some situations

- C. Exceptions – The Director of Works may approve exceptions from the standards of Tables 6.2.1 and 6.2.2 where new development extends an established pattern of roadway design that has been shown to adequately serve the area's transportation needs. The Planning Commission, with comments from the Director of Works, may approve deviations from the standards (reductions and exceedences) of Table 6.2.1 and Table 6.2.2.

6.2.7 Construction Standards

Construction plan showing materials, methods of construction and detailed specifications for all required physical improvements, for public and private roadways, shall be submitted to and approved by the Director of Works before construction is begun.

- A. Materials - The engineer shall be guided by sound engineering practices in the selection of materials for street construction and other physical improvements. Wearing surfaces shall be limited to high-type asphalt or Portland cement concrete. Base courses may be of, but not limited to, the following: Portland cement concrete, hot mixed asphalt concrete, crushed limestone, stabilization of acceptable soils with soil-cement, asphalt, lime or other recognized materials or combinations thereof. Sub-base stabilization with recognized materials may also be used.
- B. Design Standards - The engineer designing the subdivision and the approving agency shall be guided by recognized procedures for determining adequacy of the various structures. Examples and guidelines are as follows:
1. Drainage - MSD Design Criteria or the Kentucky Department of Highways Drainage Manual will be acceptable for determining hydraulic adequacy of drainage facilities.
 2. Structures - Design shall be by acceptable methods using AASHTO design loading as follows:

- | | |
|---|-------------------------------------|
| a. Local and Cul-de-sac | H - 15 |
| b. Collector | H - 20 |
| c. Arterial and All Industrial and
Commercial Zoning Districts | As required
by Director of Works |
3. Street Pavement and Base - Design methods suggested by, but not limited to, trade associations, such as Asphalt Institute, Portland Cement Association, National Limestone Institute, and others shall be used. The following basic elements shall be considered: soil characteristics, design life, traffic usage, material strengths and provisions for maintenance.
 4. Pavement Design Criteria - Pavement design for all street classifications shall conform to the current pavement design standards established by the Director of Works.
 5. Road Shoulder Design - The design of new roadway shoulders must comply with the most recent AASHTO publication.
 6. Construction Sequencing- The construction phasing of all sections within an approved preliminary plan shall be contiguous to completed subdivision sections. Any deviation from this scheduling must be approved by the Director of Works prior to beginning of construction.
 7. Construction Specifications - The construction plans shall include complete specifications to guide construction and fully explain the intent of the drawings. Because of general familiarity by contractors, the current edition of MSD or Kentucky Transportation Cabinet Standard Specifications for Road and Bridge Construction or other adopted standards may be incorporated by reference to the extent applicable, or separate detail specifications may be written to satisfy the conditions. In any event, complete specifications shall be provided which include, but are not limited to the following:
 - a. Materials and requirements for acceptance
 - b. Methods of construction, and
 - c. Basis for acceptance or rejection of the project

8. Private Roadways – All private roadways shall meet the right-of-way width and construction standards of sections 6.2.6 and 6.2.7, unless the Planning Director, with concurrence of the Director of Works, approves in writing a waiver of said standards, or unless eligible for the standards contained in section 6.2.8. Private streets/access easements located in the OR, OR-1, OR-2, OR-3, OTF, CN, CR, C-1, C-2, C-3, CM, EZ-1, M-1, M-2, M-3, PD, PRO and PEC zones shall make all dedications and complete all physical improvements or provide a financial instrument adequate to ensure completion of the improvements as required under these regulations before the Commission may approve the subdivision plat.
9. Sidewalks shall maintain an unobstructed passage way (clear of fire hydrants, street trees, utility poles, other obstructions) at least 4 feet wide, or other dimension as approved by the Director of Works.

6.2.8 Private Roadways

- A. Standards – Private roadways serving no more than five lots restricted for single family residential use may be constructed in accordance with the following standards:

Minimum Physical Improvements for Private Roadways

Number of Lots	Private Street
1 - 2 lots	P 18/R30
3 - 5 lots	P 18/R50

P = Pavement width
R = Right-of-way or easement width

- B. Grade - No private access easement grade shall be less than one percent nor more than ten percent, unless a different grade is expressly approved by the Commission and the Director of Works because of special topographical conditions.
- C. Minimum Pavement Standards - The Pavement/roadway design shall conform to the minimum physical improvements for private access easements issued by the Director of Works and to the requirements of the Louisville Metro Code of Ordinances, Chapter 94.80 - 94.82.
- D. Lots - All applicable zoning regulations, as pertaining to minimum yard requirements, shall be interpreted as being measured from the nearest boundary of the private access easement.

Right-of-Way Illustrations

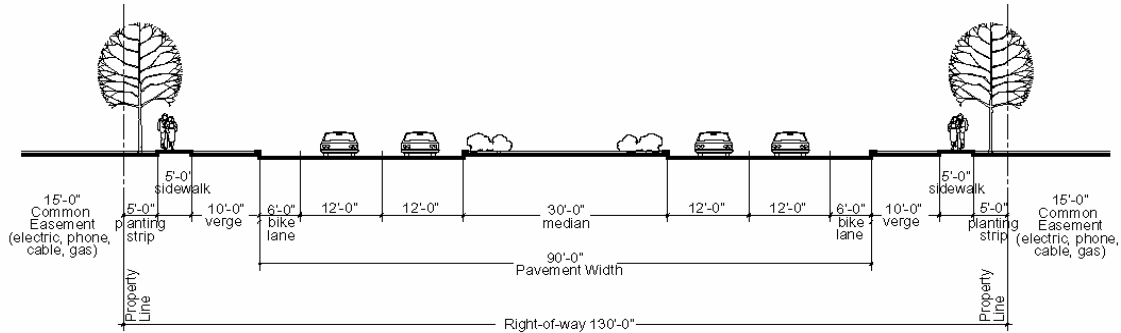
The following illustrations depict right-of-way configurations based on the standards contained in Tables 6.2.1 and 6.2.2. Streets developed prior to adoption of these standards may diverge significantly from the illustrations. Subdivisions and new developments along pre-existing routes may be required to dedicate right-of-way or make improvements in accordance with the Tables 6.2.1 and 6.2.2 standards and the following illustrations.

Notes: *(applicable to all roadway types)*

1. Greater or lesser right-of-way widths may be needed, depending on topography and other circumstances.
2. Shared use paths and bicycle lanes will be provided in selected locations based on the Bicycle and Pedestrian Plan. These facilities will not be constructed along every roadway. A wide curb lane may substitute for a bike lane, if the standards of the “Kentucky Transportation Cabinet Pedestrian and Bicycle Task Force Policy Recommendations” are met. Bike lanes and shared use paths are shown with various street types and configurations for purposes of illustration; these renderings are not intended to limit the type of bicycle facility provided with a certain road configuration.
3. Type, size and location of landscaping within the right-of-way must be in accordance with the requirements of the entity responsible for the right-of-way. Street trees shall be placed in accordance with requirements of the agency having jurisdiction over the roadway and applicable form district standards. Ground cover and low growing vegetation (two feet maximum height) compatible with utility line maintenance are recommended for the verge.
4. Sidewalk widths and setbacks vary according to form district; refer to the applicable form district regulation. A minimum five feet width is required in all form districts other than local level roadways in the Neighborhood Form District. Meandering alignment of walkways is permitted.

Major Arterial

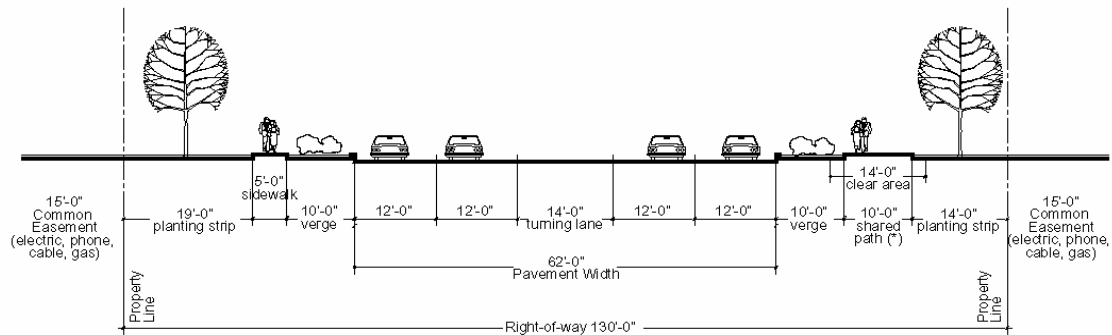
Urban Type A: Two-way, four-lane with median and bike lane / No parking



Major Arterial

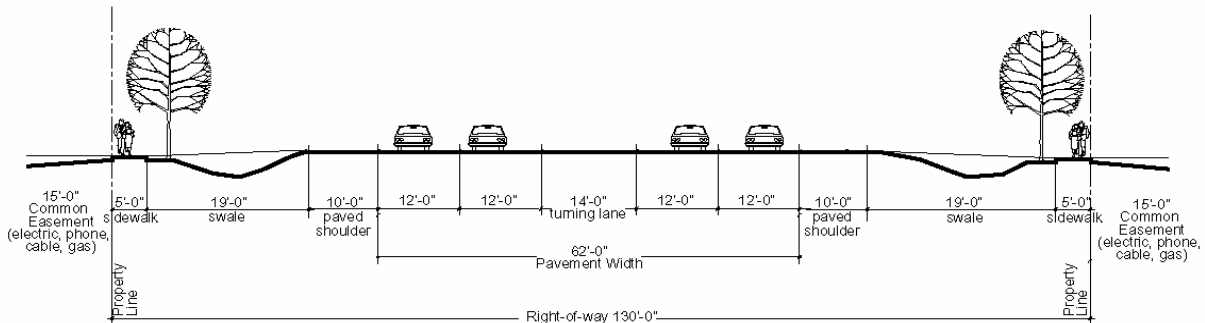
Urban Type B: Two-way, four-lane and turning lane / Shared use path / No Parking

(*) Shared use path (serving pedestrians and bicycles) may be located within the arterial right-of-way or on separate alignment, depending on factors such as frequency of street intersections and curb cuts.



Major Arterial

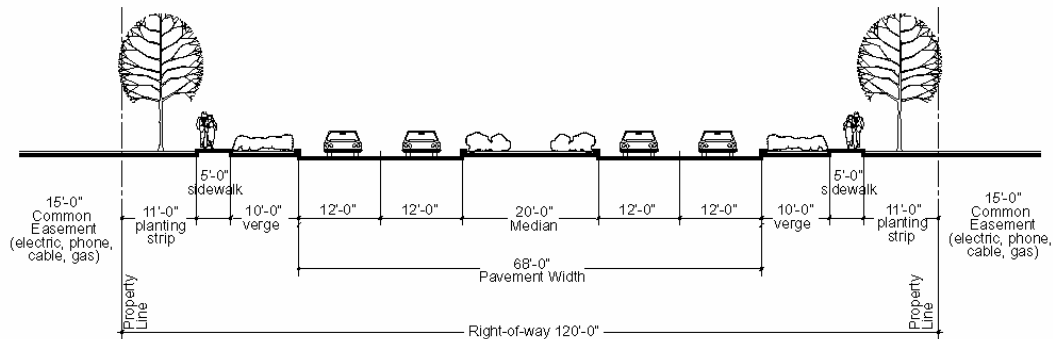
Rural: Two-way, four-lane + turning lane / paved shoulder / no parking



Minor Arterial

Type A: Two-way, four-lane and median

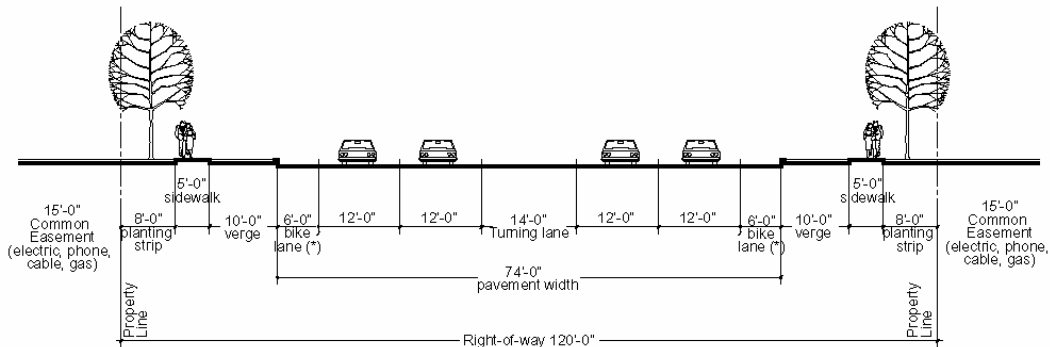
Note: Bike lanes or shared use path may be accommodated, per Bike Plan



Minor Arterial

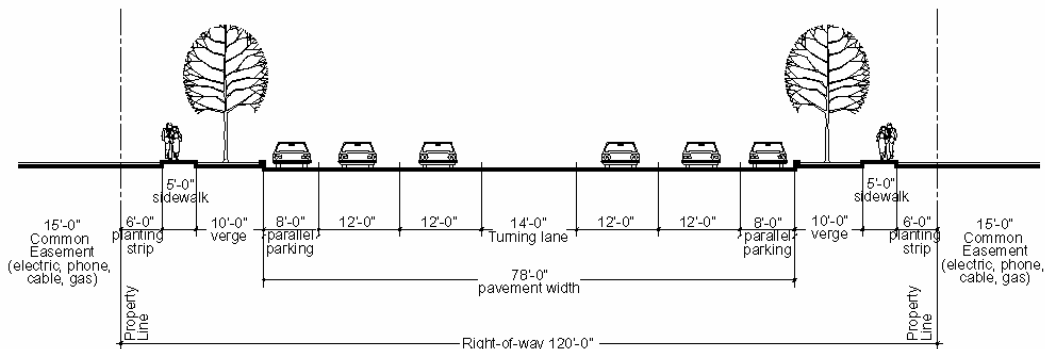
Type B: Two-way, four-lane and turning lane / No parking / Bike lanes (*)

(*) A shared use path may substitute for bike lanes if circumstances warrant



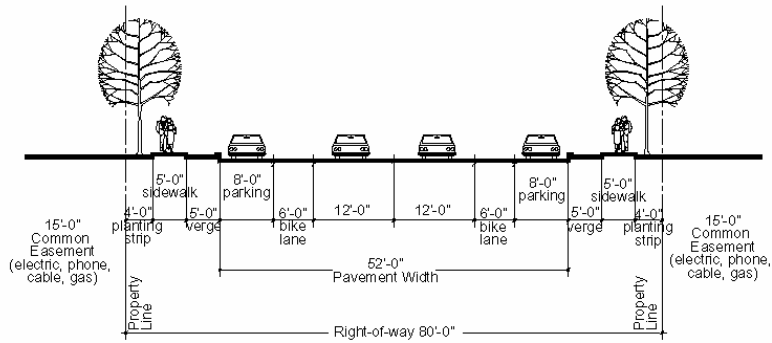
Minor Arterial

Type C: Two-way, four-lane and turning lane / Parallel parking



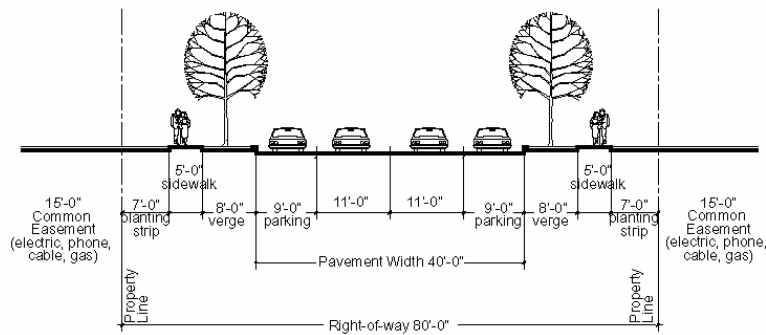
Collector Street (Primary and Secondary)

Urban Type A: Two-way, two-lane / Bike lanes / Parallel



Collector Street

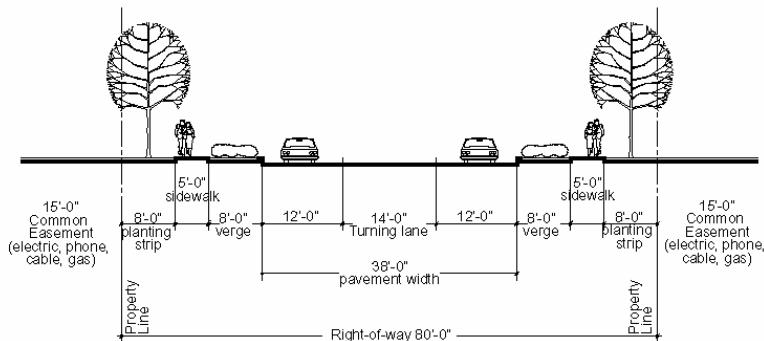
Urban Type B: Two-way, two-lane / Parallel parking



Collector Street

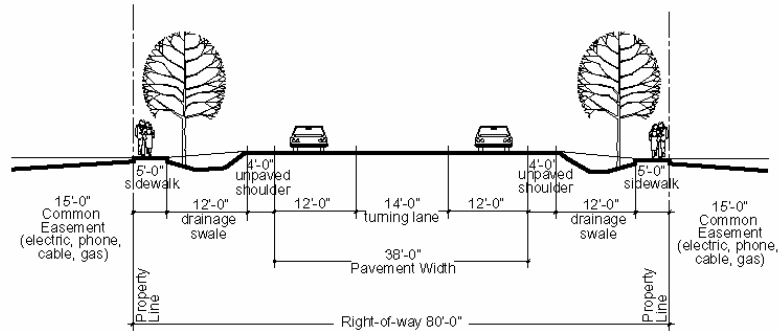
Urban Type C: Two-way, two-lane and turning lane / No parking

Note: Bike lane (6') or wide curb lane (15') on collectors without on-street parking may be appropriate if recommended in the Bicycle and Pedestrian Plan



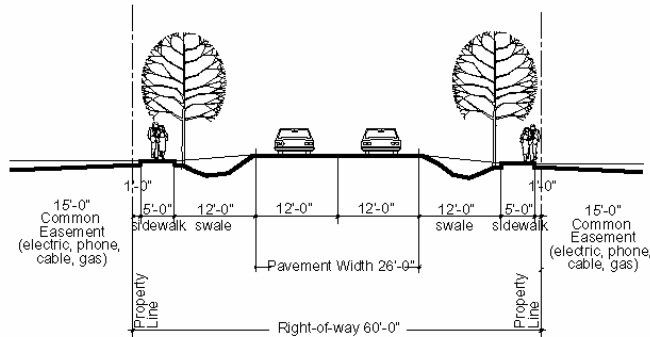
Collector Street

Rural: Two-way, two-lane + turning lane / no curb / no parking



Local Street

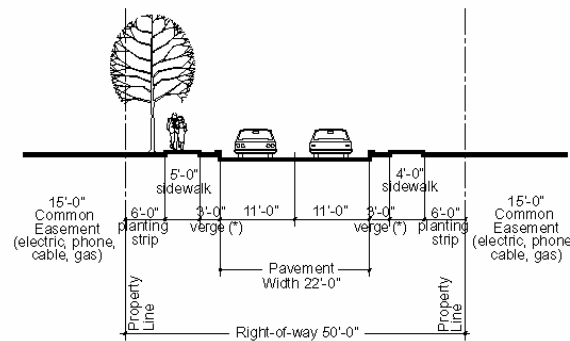
Rural: Two-way, two-lane no curb and gutter



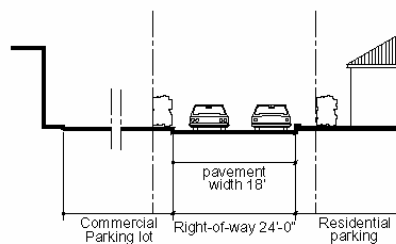
Local Street

Urban: Two-way, two-lane street with curb and gutter.

* (Trees may be planted in verge, depending upon established planting pattern)



Alley Neighborhood Form



Alley Traditional Neighborhood

